SEQUENCE LISTING

<110> Hotten, Gertrud
Neidhardt, Helge
Paulista, Michael

<120> NEW GROWTH/DIFFERENTIATING FACTOR OF TGF- FAMILY

<130> 100564-09022

<140> US 09/386,450
<141> 1999-08-31

<150> US 08/288,508
<151> 1994-08-10

<150> DE P 43 26 829.3
<151> 1993-08-10

<150> DE P 44 18 222.8
<151> 1994-05-25

<150> DE P 44 20 157.5
<151> 1994-06-09

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<170> PatentIn version 3.0

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            20                  25                  30

Gln Arg Pro Gln Gly Thr Arg Pro Gly Leu Ala Lys Ala Glu Ala Lys
        35                  40                  45

Glu Arg Pro Pro Leu Ala Arg Asn Val Phe Arg Pro Gly Gly His Ser
    50                  55                  60

Tyr Gly Gly Gly Ala Thr Asn Ala Asn Ala Arg Ala Lys Gly Gly Thr
65                  70                  75                  80

Gly Gln Thr Gly Gly Leu Thr Gln Pro Lys Lys Asp Glu Pro Lys Lys
                85                  90                  95

Leu Pro Pro Arg Pro Gly Gly Pro Glu Pro Lys Pro Gly His Pro Pro
            100                 105                 110

Gln Thr Arg Gln Ala Thr Ala Arg Thr Val Thr Pro Lys Gly Gln Leu
        115                 120                 125

Pro Gly Gly Lys Ala Pro Pro Lys Ala Gly Ser Val Pro Ser Ser Phe
    130                 135                 140

Leu Leu Lys Lys Ala Arg Glu Pro Gly Pro Pro Arg Glu Pro Lys Glu
145                 150                 155                 160

Pro Phe Arg Pro Pro Pro Ile Thr Pro His Glu Tyr Met Leu Ser Leu
                165                 170                 175

Tyr Arg Thr Leu Ser Asp Ala Asp Arg Lys Gly Gly Asn Ser Ser Val
            180                 185                 190

Lys Leu Glu Ala Gly Leu Ala Asn Thr Ile Thr Ser Phe Ile Asp Lys
        195                 200                 205

Gly Gln Asp Asp Arg Gly Pro Val Val Arg Lys Gln Arg Tyr Val Phe
    210                 215                 220
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Asp Ile Ser Ala Leu Glu Lys Asp Gly Leu Leu Gly Ala Glu Leu Arg
225 230 235 240

Ile Leu Arg Lys Lys Pro Ser Asp Thr Ala Lys Pro Ala Ala Pro Gly
245 250 255

Gly Gly Arg Ala Ala Gln Leu Lys Leu Ser Ser Cys Pro Ser Gly Arg
260 265 270

Gln Pro Ala Ser Leu Leu Asp Val Arg Ser Val Pro Gly Leu Asp Gly
275 280 285

Ser Gly Trp Glu Val Phe Asp Ile Trp Lys Leu Phe Arg Asn Phe Lys
290 295 300

Asn Ser Ala Gln Leu Cys Leu Glu Leu Glu Ala Trp Glu Arg Gly Arg
305 310 315 320

Ala Val Asp Leu Arg Gly Leu Gly Phe Asp Arg Ala Ala Arg Gln Val
325 330 335

His Glu Lys Ala Leu Phe Leu Val Phe Gly Arg Thr Lys Lys Arg Asp
340 345 350

Leu Phe Phe Asn Glu Ile Lys Ala Arg Ser Gly Gln Asp Asp Lys Thr
355 360 365

Val Tyr Glu Tyr Leu Phe Ser Gln Arg Arg Lys Arg Arg Ala Pro Leu
370 375 380

Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala Arg Cys
385 390 395 400

Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp Asp Asp
405 410 415

Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu Gly Leu
420 425 430

Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His Ala Val
435 440 445

Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro Pro Thr
450 455 460

Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe Ile Asp
465 470 475 480

Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val Val Glu
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Ser Cys Gly Cys Arg
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<210> 3

<211> 24

<212> DNA

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<223> MP-52 adapter primer

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<210> 4

<211> 23

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<222> (1)..(23)

<223> MP-52 internal primer

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<210> 5

<211> 24

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<210> 6

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<210> 7

<211> 23

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<210> 8

<211> 44

<212> DNA

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<211> 20

<212> DNA

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<223> MP-52 internal primer

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<210> 10

<211> 24

<212> DNA

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<210> 11

<211> 24

<212> DNA

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<223> MP-52 internal primer

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<210> 12

<211> 10

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<400> 12
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<210> 13

<211> 102

<212> PRT

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<222> (1)..(102)

<223> MP-52

<400> 13

Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp Asp
1 5 10 15

Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu Gly
20 25 30

Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His Ala
35 40 45

Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro Pro
50 55 60

Thr Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe Ile
65 70 75 80

Asp Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val Val
85 90 95

Glu Ser Cys Gly Cys Arg
100

<210> 14

<211> 101

<212> PRT

<213> Artificial/Unknown

<220>

<221> DOMAIN

<222> (1)..(101)

<223> portion of BMP 2 corresponding to MP 52

<400> 14

Cys Lys Arg His Pro Leu Tyr Val Asp Phe Ser Asp Val Gly Trp Asn
1 5 10 15

Asp Trp Ile Val Ala Pro Pro Gly Tyr His Ala Phe Tyr Cys His Gly
20 25 30

Glu Cys Pro Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala
35 40 45

Ile Val Gln Thr Leu Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala
50 55 60

Cys Cys Val Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp
65 70 75 80

Glu Asn Glu Lys Val Val Leu Lys Asn Tyr Gln Asp Met Val Val Glu
85 90 95

Gly Cys Gly Cys Arg
100

<210> 15

<211> 101

<212> PRT

<213> Artificial/Unknown

<220>

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<222> (1)..(101)

<223> portion of BMP 4 corresponding to MP 52

<400> 15

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1 5 10 15

Asp Trp Ile Val Ala Pro Pro Gly Tyr Gln Ala Phe Tyr Cys His Gly
20 25 30

Asp Cys Pro Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala
35 40 45

Ile Val Gln Thr Leu Val Asn Ser Val Asn Ser Ser Ile Pro Lys Ala
50 55 60

Cys Cys Val Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp
65 70 75 80

Glu Tyr Asp Lys Val Val Leu Lys Asn Tyr Gln Glu Met Val Val Glu
85 90 95

Gly Cys Gly Cys Arg
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<210> 16

<211> 102

<212> PRT

<213> Artificial/Unknown

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<221> DOMAIN

<222> (1)..(102)

<223> portion of BMP 5 corresponding to MP 52

<400> 16

Cys Lys Lys His Glu Leu Tyr Val Ser Phe Arg Asp Leu Gly Trp Gln
1 5 10 15

Asp Trp Ile Ile Ala Pro Glu Gly Tyr Ala Ala Phe Tyr Cys Asp Gly
20 25 30

Glu Cys Ser Phe Pro Leu Asn Ala His Met Asn Ala Thr Asn His Ala

35 40 45

Ile Val Gln Thr Leu Val His Leu Met Phe Pro Asp His Val Pro Lys
50 55 60

Pro Cys Cys Ala Pro Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe
65 70 75 80

Asp Asp Ser Ser Asn Val Ile Leu Lys Lys Tyr Arg Asn Met Val Val
85 90 95

Arg Ser Cys Gly Cys His
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<210> 17

<211> 102

<212> PRT

<213> Artificial/Unknown

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<222> (1)..(102)

<223> portion of BMP 6 corresponding to MP 52

<400> 17

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1 5 10 15

Asp Trp Ile Ile Ala Pro Lys Gly Tyr Ala Ala Asn Tyr Cys Asp Gly
20 25 30

Glu Cys Ser Phe Pro Leu Asn Ala His Met Asn Ala Thr Asn His Ala
35 40 45

Ile Val Gln Thr Leu Val His Leu Met Asn Pro Glu Tyr Val Pro Lys
50 55 60

Pro Cys Cys Ala Pro Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe
65 70 75 80

Asp Asp Asn Ser Asn Val Ile Leu Lys Lys Tyr Arg Asn Met Val Val
85 90 95

Arg Ala Cys Gly Cys His
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<210> 18

<211> 102

<212> PRT

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<222> (1)..(102)

<223> portion of BMP 7 corresponding to MP 52

<400> 18

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Asp Trp Ile Ile Ala Pro Glu Gly Tyr Ala Ala Tyr Tyr Cys Glu Gly
            20                  25                  30

Glu Cys Ala Phe Pro Leu Asn Ser Tyr Met Asn Ala Thr Asn His Ala
        35                  40                  45

Ile Val Gln Thr Leu Val His Phe Ile Asn Pro Glu Thr Val Pro Lys
    50                  55                  60

Pro Cys Cys Ala Pro Thr Gln Leu Asn Ala Ile Ser Val Leu Tyr Phe
65                  70                  75                  80

Asp Asp Ser Ser Asn Val Ile Leu Lys Lys Tyr Arg Asn Met Val Val
                85                  90                  95

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<223> portion of BMP 3 corresponding to primer OD

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<210> 22

<211> 22

<212> DNA

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<210> 23

<211> 22

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<210> 24

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<223> portion of TGF-beta-1 corresponding to primer OD

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<210> 25

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<212> DNA

<213> Artificial/Unknown

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<210> 26

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<213> Artificial/Unknown

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<223> portion of Inhibin alpha corresponding to primer OD

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<212> DNA

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<223> portion of Inhibin beta-gamma corresponding to primer OD

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<210> 29

<211> 22

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<223> portion of Inhibin beta-beta corresponding to primer OD

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<210> 30

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<212> DNA

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<223> Primer OID

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<210> 31

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<212> DNA

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<223> portion of BMP 2 corresponding to primer OID

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<210> 32

<211> 21

<212> DNA

<213> Artificial/Unknown

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<222> (1)..(21)

<223> portion of BMP 3 corresponding to primer OID

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<210> 33

<211> 21

<212> DNA

<213> Artificial/Unknown

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<222> (1)..(21)

<223> portion of BMP 4 corresponding to primer OID

<400> 33
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<210> 34

<211> 21

<212> DNA

<213> Artificial/Unknown

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<221> misc_feature

<222> (1)..(21)

<223> portion of BMP 7 corresponding to primer OID

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<210> 35

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<212> DNA

<213> Artificial/Unknown

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<223> portion of TGF-beta-1 corresponding to primer OID

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<210> 36

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<212> DNA

<213> Artificial/Unknown

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<223> portion of TGF-beta-2 corresponding to primer OID

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<210> 37

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<212> DNA

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<222> (1)..(21)

<223> portion of TGF-beta-3 corresponding to primer OID

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<210> 38

<211> 21

<212> DNA

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<222> (1)..(21)

<223> portion of Inhibin alpha corresponding to primer OID

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<210> 39

<211> 21

<212> DNA

<213> Artificial/Unknown

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<222> (1)..(21)

<223> portion of Inhibin beta-gamma corresponding to primer OID

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<210> 40

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<213> Artificial/Unknown

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<223> portion of Inhibin beta-beta corresponding to primer OID

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<223> Adapter

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